STATE OF SOUTH CAROLINA

BEFORE THE PUBLIC SERVICE COMMISSION

DOCKET NO. 2017-3-E

In re: Annual Review of Base Rates for Fuel Costs of Duke Energy Carolinas, LLC	))))))))	**COMMENTS OF SOUTH CAROLINA COASTAL CONSERVATION LEAGUE AND SOUTHERN ALLIANCE FOR CLEAN ENERGY**

INTRODUCTION

Through counsel, the South Carolina Coastal Conservation League ("CCL") and the Southern Alliance for Clean Energy ("SACE," collectively "Conservation Groups") respectfully submit these comments in lieu of testimony in the above-captioned docket. These comments are filed in response to the direct testimony filed by Duke Energy Carolinas, LLC ("DEC" or "the Company") on July 28, 2017.

CCL and SACE's comments specifically address the Company's 2017 Distributed Energy Resource ("DER") program updates and 2017 update to the Value of Net Energy Metering ("NEM") Distributed Energy Resources, as described in Company's Witness Jason Martin and Kimberly McGee's testimony. CCL and SACE support the continued progress of the Company towards meeting the small and large-scale DER goals of Act 236. Going forward, the Conservation Groups request that the Company make additional progress in filling out the NEM DER valuation methodology and avoid further delays in the Shared Solar and Utility-Scale Solar programs.

PROCEDURAL BACKGROUND

This annual fuel cost proceeding was initiated under S.C. Code Ann. Section 58-27-865, which establishes the procedure for annual hearings for the Commission and all interested parties to review the fuel purchasing practices and policies of Duke Energy Progress, LLC ("the Company") and for the Commission and the Company to make adjustments as necessary. S.C. Code Ann. Section 58-27-865 also provides the procedure for review and recovery of fuel costs and of "incremental and avoided costs of distributed energy resource programs and net metering as authorized and approved under Chapters 39 and 40, Title 58." S.C. Code Ann. Section 58-27-865. Those costs "shall be allocated and recovered from customers under a separate distributed energy component of the overall fuel factor that shall be allocated and recovered based on the same method that is used by the utility to allocate and recover variable environmental costs." S.C. Code Ann. Section 58-27-865. The Company is allowed to recover reasonable and prudent costs incurred to implement approved distributed energy resource ("DER") programs, including certain costs related to net energy metering ("NEM"). Recoverable costs were capped in Act 236 "[f]or the protection of consumers and to ensure that the cost of DER programs do not exceed a reasonable threshold." S.C. Code Ann. Section 58-27-150; S.C. Public Service Commission Order 2015-194.

Pursuant to the South Carolina Distributed Energy Resource Act, Act 236, and the Settlement Agreement approved by the Commission in Order No. 2015-194, Docket No. 2014-246-E, the Company will also compute and update annually the "costs and benefits of net metering and the required amount of the DER NEM Incentive" coincident in time with the Utility's filing under the fuel clause.

The Distributed Energy Resource Program Act, Act 236, effective on June 2, 2014, required a generic proceeding to establish a methodology to evaluate the benefits and costs of net metering and customer generation to the electrical utility, the customer-generators, and those customers of the electrical utility that are not customer-generators. The generic proceeding, Commission Docket No. 2014-246-E, culminated in a settlement agreement between the utilities, Office of Regulatory Staff ("ORS"), and intervening parties that established a methodology framework for calculating the costs and benefits of distributed energy resources like solar. The methodology included the following eleven components:

+/- Avoided Energy
+/- Energy Losses/Line Losses
+/- Avoided Capacity
+/- Ancillary Services
+/- T&D Capacity
+/- Avoided Criteria Pollutants
+/- Avoided CO_2 Emissions Cost
+/- Fuel Hedge
+/- Utility Integration & Interconnection Costs
+/- Utility Administration Costs
+/- Environmental Costs
= Total Value of NEM Distributed Energy Resource

Each component in the NEM DER valuation methodology is accompanied by a description and guidelines for calculating the component. The Settlement Agreement in 2014-246-E allows the utilities to consider some components as placeholders "where there is currently a lack of capability to accurately quantify a particular category and/or a lack of cost or benefit to the Utility system."[1] Placeholder categories are to be "updated and included in the calculation of costs and benefits of net metering if and when

[1] Settlement Agreement, SCPSC Docket 2014-246-E, at page 4 of 25.

capabilities to reasonably quantify those values and quantifiable costs or benefits to the Utility system in such categories become available."[2]

Aside from the Net Energy Metering program and valuation updates, DEC is implementing other DER programs to meet the goals of Act 236. For example, the Company has program designs and plans to introduce a Shared Solar program, including an option for low-income participants. The Company has also issued a request for proposals ("RFP") and has plans to acquire or procure power from utility-scale solar facilities.

SOUTH CAROLINA DISTRIBUTED ENERGY RESOURCE PROGRAMS

CCL and SACE are generally encouraged by the progress made towards the goals of Act 236. The passage of Act 236 was the culmination of over a year's worth of discussion and collaboration among a diverse array of stakeholders. After Act 236 became law, most of these same stakeholders undertook a second year of collaborative work, through seven docketed proceedings before the Commission, to implement the law. The NEM program, rebates offered by the utilities including DEC, and leasing of renewable energy generators has enabled thousands of South Carolinians to install rooftop solar. The utilities, including DEC, have issued RFPs for utility-scale renewables and have rolled out plans for Shared Solar programs across South Carolina. After years of work, the promise of Act 236 is being realized.

In DEC's filings in this proceeding, Witness Jason Martin reported that the Company is on track to meet its Act 236 goal for renewable energy projects less than 1 megawatt ("MW") in size. According to Witness Martin, 29.8 MW of solar projects

---

[2] *Id.*

under 1 MW in size have been installed in DEC territory as of June 1, 2017. Witness Martin also reports that DEC has met its goal for small-scale projects under 20 kilowatts ("kWs") in size. Conservation Groups commend the Company's efforts to meet these goals and note that this successful adoption rate signals strong customer support for clean, renewable energy in South Carolina. The Conservation Groups encourage DEC, ORS, and other stakeholders to begin thinking now about what programs can help meet this customer demand for rooftop solar once the initial Act 236 goals are met.

In contrast to the rooftop solar program success to date, the Company is far from meeting its Shared Solar and Utility-Scale solar goals. The Company reports that its anticipated completion date for building utility-scale 1-10 MW projects has been pushed back by more than two years, to mid-2019. The Company originally estimated completing these projects by January 1, 2017, and in its 2016 fuel cost proceeding DEC estimated completion by July 2017.[3] The Company reports that this is due to interconnection delays. DEC should provide additional information on the cause of the interconnection delays, to allow stakeholders engaged in both this proceeding and the interconnection proceeding (Commission Docket No. 2015-362-E) to provide input on any additional steps that could be taken to speed up the process. Similar to its utility-scale project delay, the Company has repeatedly delayed the Shared Solar program start date, a program that was initially expected to begin in 2016.[4] Conservation Groups request that the Company seek ways to avoid further delays in both its utility-scale (1-10

[3] *See* Duke Energy Carolinas, LLC, Distributed Energy Resource Program Application, S.C. Public Service Commission Docket No. 2015-55-E, page 5, footnote 4 (Feb. 9, 2015); Direct Testimony of Emily O. Felt, S.C. Public Service Commission Docket No. 2016-3-E, at page 10, lines 18-21 (July 22, 2016).

[4] *See* Duke Energy Carolinas, LLC Distributed Energy Resource Program Application, S.C. Public Service Commission Docket No. 2015-55-E, page 7 (Feb. 9, 2015).

MW) and Shared Solar programs. It is important to continue pressing forward on the utility-scale programs, particularly because Act 236 allows the Company to make additional investments in utility-scale solar of another one percent of the previous five-year average of retail peak demand once the initial utility-scale and customer-scale program targets have been completed.

2017 Net Energy Metering Distributed Energy Resource Valuation Update

The Conservation Groups submit that there is still more progress to be made on valuing NEM DER resources. CCL and SACE participated in the Company's Fourth Quarter of 2016 DER Collaborative meeting, which included a discussion of further updates to the NEM DER value, as reported in Witness Martin's testimony in this proceeding at pages 9-11. The Conservation Groups also participated in a follow-up phone call with DEC (and with Duke Energy Progress, LLC, or "DEP") on February 22, 2017, regarding the avoided transmission and distribution value in particular. Conservation Groups appreciated the discussion of these important topics, but are disappointed in the lack of progress to date on updating the NEM DER valuation.

In subsequent updates to the NEM DER values, Conservation Groups strongly recommend and request that DEC make expedited progress in further filling in the NEM DER valuation methodology. As of 2017, nearly three years after the methodology was first adopted, the Company is still using zero values for seven of the eleven cost/benefit methodology categories. These include avoided transmission and distribution costs and avoided environmental costs, for which the Conservation Groups have previously recommended calculating and providing values. Conservation Groups have submitted multiple comments and testimony in other proceedings related to filling in these and other categories. Examples of previous Conservation Group input include the following:

- Expert Testimony filed in Commission Docket No. 2014-246-E
- Comments filed in Commission Docket No. 2015-203-E
- Expert Testimony filed in Commission Docket No. 2016-3-E
- Participation in DEP/DEC quarterly DER Collaborative meetings

For avoided transmission and distribution costs in particular, CCL and SACE have attached to these comments a chart prepared by Witness Thomas Vitolo, PhD for the South Carolina Electric & Gas Company's annual fuel cost proceeding earlier this year, Docket No. 2017-2-E. This chart provides examples of avoided transmission and distribution values calculated in other contexts and should serve as a resource to DEC going forward. The Conservation Groups are also willing to continue to discuss appropriate avoided transmission and distribution calculations and values with the Company going forward.

Regarding avoided environmental costs, the Company agreed at the Fourth Quarter DER Collaborative meeting in December 2016 that it would investigate and separately state the avoided environmental allowance costs and environmental reagent costs whenever possible. In this year's annual update, the Company has separately reported avoided NO_x and SO_x under avoided criteria pollutants. The Conservation Groups request that the Company complete an investigation of what other avoided environmental costs, such as avoided coal ash costs and avoided water withdrawal and consumption costs, are quantifiable at this time and report this to stakeholders at either the Third or Fourth Quarter DER Collaborative meetings later in 2017. These costs should be included and separately reported in further NEM DER valuation updates.

Finally, the Conservation Groups request that DEC continue its work to update its line-loss studies, include the most accurate and updated line-loss values in its annual NEM DER valuation updates, and incorporate feedback from stakeholders in calculating those values.[5] More specifically, as recommended in past comments and testimony, CCL and SACE request that the new or updated study account for marginal line losses and quantify avoided energy, avoided generating capacity, and avoided transmission capacity costs associated with line losses that are avoided by NEM DER resources. The study should be specific to DEC and DEP's jointly dispatched system and account for expected future hourly load forecasts and expected generation and transmission infrastructure. The study should use a solar photovoltaic ("PV") profile rather than a fixed constant output profile, since most of the NEM DER resources in DEC's South Carolina territory are expected to be solar PV in the near future.[6] The Conservation Groups request that this line loss study be completed by the next annual update in 2018 and the new line loss values be incorporated into the 2018 NEM DER valuation.

CONCLUSION

CCL and SACE commend the progress being made by the South Carolina utilities, including DEC, towards the goals of Act 236. The Conservation Groups respectfully submit that in order to continue progress towards the goals of Act 236, DEC should (1) avoid further delays in the Shared Solar programs and Utility-Scale solar

[5] DEC has indicated that it is "evaluating adoption of a common line loss calculation approach for both [DEP and DEC]." Witness Martin Direct Testimony at page 10, lines 13-14.
[6] *See, e.g.*, Witness Vitolo Direct Testimony in Commission Docket No. 2016-3-E at page 16, lines 29-30, page 17, line 1.

projects, and (2) make additional progress in filling out the NEM DER valuation methodology in future updates.

Respectfully submitted this 18th day of August, 2017.

s/ J. Blanding Holman IV
J. Blanding Holman IV
S.C. Bar No. 72260
Southern Environmental Law Center
463 King St. – Suite B
Charleston, SC 29403
Telephone: (843) 720-5270
Fax: (843) 720-5240
bholman@selcsc.org

s/ Lauren J. Bowen
Lauren J. Bowen
Southern Environmental Law Center
601 West Rosemary St., Suite 220
Chapel Hill, NC 27516
Telephone: (919) 967-1450
Fax: (919) 929-9421
lbowen@selcnc.org

Attorneys for South Carolina Coastal Conservation League and Southern Alliance for Clean Energy

Avoided Cost of Transmission and Distribution Detail (nominal $)

Utility or jurisdiction	Source	Avoided T&D ($/kW-year)
Idaho Power	Idaho Power 2013	$0.00
Arizona Public Service	Mendota 2014	$0.00
Wisconsin	Cadmus 2013	$0.00
Indiana Michigan Power	I&M 2013	$0.00
State of Texas	Texas 2015	$0.00
Consumers Energy	Mendota 2014	$0.00
Vectren	Vectren 2014	$12.14
Nevada Power	NVE 2012	$12.23
Public Service Oklahoma	PSO 2014	$19.17
Ameren Missouri	Ameren 2014	$27.68
Xcel Energy Colorado	Xcel CO 2013	$28.40
Southwest Public Service	SPS 2013	$28.87
Potomac Edison	Exeter 2014	$30.69
Connecticut Light and Power	AESC 2013	$32.24
Baltimore Gas and Electric	Exeter 2014	$33.15
PGE Oregon	Mendota 2014	$33.20
National Grid Rhode Island	AESC 2013	$41.24
ComEd Illinois	Mendota 2014	$42.00
Consolidated Edison Non Network	Mendota 2014	$42.63
United Illuminating	AESC 2013	$47.82
MidAmerican South Dakota	Mendota 2014	$48.16
MidAmerican	Mendota 2014	$51.86
Northern Indiana Public Service	NIPSCO 2014	$52.25
PacifiCorp Oregon	Mendota 2014	$52.64
PacifiCorp Utah	Mendota 2014	$52.64
PacifiCorp Washington	Mendota 2014	$52.64
Xcel Energy Minnesota	Xcel MN 2012	$53.17
Southern California Edison	Mendota 2014	$53.49
Delmarva Power and Light	Exeter 2014	$55.43
Northwest Utilities	Mendota 2014	$65.59
Public Service New Hampshire	AESC 2013	$70.05
San Diego Gas and Electric	Mendota 2014	$73.32
Pacific Gas and Electric	Mendota 2014	$75.57
PEPCO	Exeter 2014	$79.12
Southern Maryland Electric Coop	Exeter 2014	$79.12
NSTAR	AESC 2013	$89.79
WMECO	AESC 2013	$98.35
Tucson Electric Power	Mendota 2014	$100.00
Unitil New Hampshire	AESC 2013	$102.29
Interstate Power and Light	Mendota 2014	$107.00
Consolidated Edison Network	Mendota 2014	$120.52
Vermont	AESC 2013	$158.15
Unitil Massachusetts	AESC 2013	$173.79
National Grid Massachusetts	AESC 2013	$200.01

Source: Baatz, Brendon. Everyone Benefits: Practices and Recommendations for Utility System Benefits of Energy Efficiency. ACEEE: June 2015.